AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application:

Listing of Claims:

1. (currently amended) A corrosion resistant, high strength austenitic stainless steel consisting of 1.0% or less of Si, 2.0% or less of Mn, 0.5% or less of O, 7 to 30% of Ni, 14 to 26% of Cr, 0.3% or less of combination of C and N, 0.045% or less of P, 0.030% or less of S, at least one element selected from the group consisting of 1.0% or less of Ti, 2.0% or less of Zr and 2.0% or less of Nb, and the balance consisting of Fe and unavoidable impurities, the percentage being given in weight basis;

said steel containing carbonitride with a grain size of 100 nm or less dispersed therein;

said steel having an average crystal grain size of 1 μm or less; and

said steel containing 90% by volume or more of austenite phase.

2. (currently amended) A corrosion resistant, high strength austenitic stainless steel consisting of 1.0% or less of Si, 2.0% or less of Mn, 0.5% or less of O, 7 to 30% of Ni, 14 to 26% of Cr, 3% or less of Mo, 0.3% or less of combination of C and N, 0.045% or less of P, 0.030% or less of S, at least one element selected from the group consisting of 1.0% or less of Ti, 2.0% or less of Zr and 2.0% or less of Nb, and the balance consisting of Fe and unavoidable impurities, the percentage being given in weight basis;

said steel containing carbonitride with a grain size of 100 nm or less dispersed therein;

said steel having an average crystal grain size of 1 μm or less; and

said steel containing 90% by volume or more of austenite phase.

3. (original) A corrosion resistant, high strength austenitic stainless steel according to Claim 1 or 2, wherein the combination of C and N is contained in an amount of from 0.1 to 0.3% by weight.

4. (currently amended) A method for manufacturing a corrosion resistant, high strength austenitic stainless steel, which comprises the steps of:

providing a mechanically milled powder with an average crystal grain size of 200 nm or less consisting of 1.0% or less of Si, 2.0% or less of Mn, 0.5% or less of O, 7 to 30% of Ni, 14 to 26% of Cr, 0.3% or less of combination of C and N, 0.045% or less of P, 0.030% or less of S, at least one element selected from the group consisting of 1.0% or less of Ti, 2.0% or less of Zr and 2.0% or less of Nb, and the balance consisting of Fe and unavoidable impurities, the percentage being given in weight basis; and

subjecting said mechanically milled powder to a process selected from the group consisting of:

(a) consolidating the mechanically milled powder at 700 to 900°C, and

(b) consolidating the mechanically milled powder at 700 to 900°C to obtain a consolidated material and thermomechanically treating the consolidated material,

so as to form austenitic stainless steel having carbonitride dispersed therein.

5. (currently amended) A method for manufacturing a corrosion resistant, high strength austenitic stainless steel, which comprises the steps of:

providing a mechanically milled powder with an average crystal grain size of 200 nm or less consisting of 1.0% or less of Si, 2.0% or less of Mn, 0.5% or less of O, 7 to 30% of Ni, 14 to 26% of Cr, 3% or less of Mo, 0.3% or less of combination of C and N, 0.045% or less of P, 0.030% or less of S, at least one element selected from the group consisting of 1.0% or less of Ti, 2.0% or less of Zr and 2.0% or less of Nb, and the balance consisting of Fe and unavoidable impurities, the percentage being given in weight basis; and

subjecting said mechanically milled powder to a process selected from the group consisting of:

(a) consolidating the mechanically milled powder at 700 to 900°C, and

(b) consolidating the mechanically milled powder at 700 to 900°C to obtain a consolidated material and thermomechanically treating the consolidated material,

so as to form austenitic stainless steel having carbonitride dispersed therein.

6. (previously presented) The method according to Claim 4 or 5, wherein the value f determined by the following equation (1) falls within the range of from 0.4 to 2.0:

$$f = [8.33(C) + 7.14(N)]/[1.10(Zr) + 2.09(Ti) + 1.08(Nb)] \quad (1)$$

wherein (C), (N), (Ti), (Zr) and (Nb) are the amounts (weights) of the C, N, Ti, Zr and Nb, respectively, in the mechanically milled powder.

7. (previously presented) The method according to Claim 4 or 5, wherein the mechanically milled powder is a product obtained by subjecting a pre-alloy powder or a powder that meets the composition defined in Claim 4 or 5 as a whole to mechanical grinding or alloying treatment with an attrition mill or ball mill at 100°C or lower for 30 hours or more so that the product has an average crystal grain size of 200 nm or less.

8. (original) The method according to Claim 7, wherein said mechanical grinding or alloying treatment is conducted using steel balls made of an Fe alloy containing 0.3% or less of combination of C and N and having a heat conductivity at 100°C of 16.7 W/m·K or higher.

9. (currently amended) The method according to Claim 4 or 5, wherein said consolidating ~~are~~ is carried out at 700 to 900°C after the mechanically milled powder has been retained at a temperature within a range of from 400 to 650°C for a period of 0.5 to 6 hours, or alternatively, after the mechanically milled powder has been suffered from a rise of temperature from 400 to 650°C for a period of 0.5 to 6 hours.

10. (previously presented) The method according to Claim 4 or 5, wherein the step of consolidating and the step of successive thermomechanical treatment of the molded product include the step of solidifying the mechanically milled powder by hot compression, hot rolling, hot isostatic pressing or hot extrusion at 700 to 900°C, or the step of subjecting the molded product to a heat treatment or hot forging at 700 to

900°C, and the additional step of imparting a desired shape to the molded product during any of these preceding steps.

11. (original) A method for manufacturing a corrosion resistant, high strength austenitic stainless steel, which comprises the step of subjecting the corrosion resistant, high strength austenitic stainless steel according to Claim 1 or 2 to press molding at a temperature of 700 to 900°C to give the steel a desired shape.

12. (currently amended) A corrosion resistant, high strength austenitic stainless steel according to any one of Claims 1-3, having been formed from a mechanically ~~processed~~ milled powder, and wherein the value f determined by the following equation (1) falls within the range of from 0.4 to 2.0:

$$f = [8.33(C) + 7.14(N)]/[1.10(Zr) + 2.09(Ti) + 1.08(Nb)] \quad (1)$$

wherein (C), (N), (Ti), (Zr) and (Nb) are the amounts (weights) of the C, N, Ti, Zr and Nb, respectively, in the mechanically ~~processed~~ milled powder.

13. (previously presented) A corrosion resistant, high strength austenitic stainless steel according to Claim 1 or 2, wherein said at least one element is precipitated as M(C,N) carbonitride, where M is said at least one element.

14. (previously presented) A corrosion resistant, high strength austenitic stainless steel according to Claim 1 or 2, wherein said stainless steel has 0.6% or less Si and 0.2% or less Mn.

15. (cancelled).

16. (previously presented) A corrosion resistant, high strength austenitic stainless steel, formed by a method which comprises the steps of:

providing a mechanically milled powder with an average crystal grain size of 200 nm or less consisting of 1.0% or less of Si, 2.0% or less of Mn, 0.5% or less of O, 7 to 30% of Ni, 14 to 26% of Cr, 0.3% or less of combination of C and N, 0.045% or less of P, 0.030% or less of S, at least one element selected from the group consisting of 1.0% or less of Ti, 2.0% or less of Zr and 2.0% or less of Nb, and the balance consisting of Fe and unavoidable impurities, the percentage being given in weight basis; and

subjecting said mechanically milled powder to a process selected from the group consisting of:

(a) consolidating the mechanically milled powder at 700 to 900°C, and

(b) consolidating the mechanically milled powder at 700 to 900°C to obtain a consolidated material and thermomechanically treating the consolidated material

wherein the austenitic stainless steel has carbonitride dispersed therein and said steel has an average crystal grain size of 1 μm or less.

17. (previously presented) A corrosion resistant, high strength austenitic stainless steel, formed by a method which comprises the steps of:

providing a mechanically milled powder with an average crystal grain size of 200

nm or less consisting of 1.0% or less of Si, 2.0% or less of Mn, 0.5% or less of O, 7 to 30% of Ni, 14 to 26% of Cr, 3% or less of Mo, 0.3% or less of combination of C and N, 0.045% or less of P, 0.030% or less of S, at least one element selected from the group consisting of 1.0% or less of Ti, 2.0% or less of Zr and 2.0% or less of Nb, and the balance consisting of Fe and unavoidable impurities, the percentage being given in weight basis; and

subjecting said mechanically milled powder to a process selected from the group consisting of:

~~(a) consolidating the mechanically milled powder at 700 to 900°C, and~~

(b) consolidating the mechanically milled powder at 700 to 900°C to obtain a consolidated material and thermomechanically treating the consolidated material

wherein the austenitic stainless steel has carbonitride dispersed therein and said steel has an average crystal grain size of 1 μm or less.

18 (previously presented) A corrosion resistant, high strength austenitic stainless steel according to Claim 16 or 17, wherein said carbonitride has a grain size of 100 nm or less, and said steel contains 90% by volume or more of austenite phase.

19. (currently amended) A corrosion resistant, high strength austenitic stainless steel according to Claim 16 or 17, having been formed from [[a]] the mechanically ~~processed~~ milled powder, and wherein the value f determined by the following equation (1) falls within the range of from 0.4 to 2.0:

$$f = [8.33(C) + 7.14(N)]/[1.10(Zr) + 2.09(Ti) + 1.08(Nb)] \quad (1)$$

wherein (C), (N), (Ti), (Zr) and (Nb) are the amounts (weights) of the C, N, Ti, Zr and Nb, respectively, in the mechanically ~~processed~~ milled powder.

20. (new) A corrosion resistant, high strength austenitic stainless steel according to Claim 16 or 17, wherein said carbonitride has a grain size of 100 nm or less.

21. (new) A corrosion resistant, high strength austenitic stainless steel ~~according to Claim 16 or 17, wherein said carbonitride is M(C,N) carbonitride, where M~~ is said at least one element.

22. (new) The method according to Claim 4 or 5, wherein, prior to subjecting said mechanically milled powder to said process, the mechanically milled powder is retained at a temperature of 400° to 650°C.

23. (new) The method according to Claim 22, wherein the mechanically milled powder is retained at the temperature of 400° to 650°C for 0.5 to 6 hours.

24. (new) A corrosion resistant, high strength austenitic stainless steel according to Claim 16 or 17, wherein the stainless steel is formed by a method including a further step of retaining the mechanically milled powder at a temperature of 400° to 650°C prior to said subjecting.

25. (new) A corrosion resistant, high strength austenitic stainless steel according to Claim 24, wherein the mechanically milled powder is retained at the temperature of 400° to 650° for 0.5 to 6 hours.